```
>>>>>>>><<<<<<<<
```

THE
PLOTTER

EDITED BY: DICK WAGNER
CHAIRMAN: SYD WYNCOOP
V/CHAIRMAN: DICK WAGNER
SECRETARY: JACK ARMSTRONG
TREASURER: ROD GOWEN
PR OFFICER: BOB EVANS
LIBRARIAN: JAMES EDWARDS

```
*****************************
```

MEETING

The FEBRUARY meeting will be:

on: FRI., FEBRUARY 13 1987

at: 7:30 P.M.
in: COMMUNITY ROOM
    FAR WEST FEDERAL S & L
    OREGON CITY SHOPPING CENTER

```
*****************************
```

WHAT YOU WILL
  FIND IN THIS
    ISSUE-

COMPUTING THE FUTURE--
   IN CLACKAMAS COUNTY
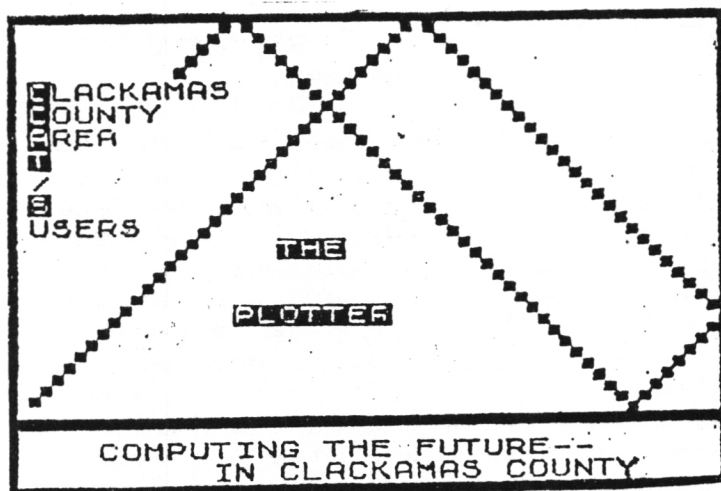
Chairman's Corner

Thank you for your confidence in me as your chairman. I would however like to have some input from you as to the interests and direction you would like our club to have. Please feel free to call me at 760-7786.

We have officially absorbed PATS as our machine code special interest group (MC-SIG). The SIG meets on the 2nd Saturday, 1:00pm, at Portland Community College, Sylvania Campus. The first instruction session is next month. Requirements and organization will be discussed then. Let's get behind this effort while we have the opportunity.

I have recently received catalogs from many of the firms supporting our computers. There are some great sales on many of the older but still very useful programs. Watch for bargains. There is also much new becoming available.

Last word, support your club or it may not be there to support you! Many still need to pay their dues, attend meetings, etc.

See you in February!
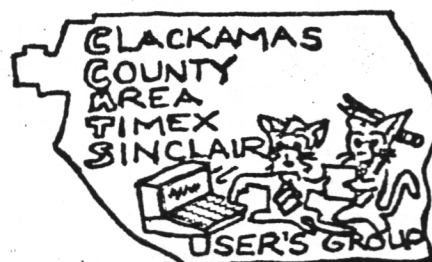
SECRETARY'S SECRETS

by Jack Armstrong

The January meeting was called to order at 7:50 p.m. by the newly re-elected Chairman, Syd Wyncoop who made the usual reminders about the library and the refreshments brought by Rod. He introduced Bob Wilson from Mill City who was a potential new member. Under old business he called on Ray Merlin who reported the minimal progress on the membership committee and the expected progress to be reported on at the next meeting. Dick Wagner reported on the financial format and balances as of 12-15-86. His report covered the single-entry system used for our banking records and the fact that we use an account of Rod's at Willamette Savings. The account draws some interest which is reported on Rod's tax return and we reimburse him for his service. The major expenses are the printing costs of the Plotter and mailing, as well as subscriptions to various magazines and newsletters from other clubs around the country. A folder is maintained that holds statements, receipts and logs our expenses. Further discussion of procedures followed. Rod reported that $90+ was taken in at the meeting. Mike Carver (PATS) reported on the SIG for machine code instruction to be held on 2nd Saturdays at Portland Comm. College, Sylvania Campus, Rm B15, 1:00 to 4:00 which will cover Z80 instruction. An assembler/disassembler is necessary and he and Syd noted that the Zeus assembler is probably the best for these purposes and Rod stated he handles these from Zebra and can offer a discount for those interested. D.S. Lewis may be the instructor for the classes and will probably start with 8080 code, as it is his opinion that it makes for an easy way to start and progress to the Z80. Under New Business Dick reported on problems and possible solutions concerning the Chain-Tapes and further discussion followed. Galen reported on seeing our meeting notice on What's Happening which promoted Bob to report that he gets cooperation from Channels 22, 49 and Cable Access. Meeting ended at 9:00.

PORTLAND AREA TIMEX/SINCLAIR USERS (PATS) -- CORNER

by Michael E. Carver

Hello from the PATS sub-group of C/CATS.

January's meeting of PATS was to be devoted to planning the future of a Z80 machine code class. It was hoped that those interested in learning machine code, would attend and provide needed input on the future of such a class. Alas, no interested people attended. We found it impossible to plan for a "class" without knowing if anyone really wanted to learn.

We still have the intention to provide such a service, but only if there is a demand for it. It was originally planned to start the first lesson at the February meeting. Due to lack of interest and input, we are at a loss as to the need/demand for this service.

The February meeting will consist a general meeting from 1pm to 2pm. The official Machine Coding will be from 2pm to 4pm. If any interested parties are present, a general introduction to machine code will be presented (by a group discussion) on numbering systems (binary, octal, decimal and hexidecimal). We will also provide an introductory overview of machine code. As we have no confirmed "pupils", no set course can be provided. If you are serious about learning machine code, **be at this meeting**. Your input will provide us with the needed direction for future classes. If there are no interested "pupils"at this meeting, the PATS group will decide on a "group machine code project". This project will involve special machine code routines and programs.

Members of PATS, who are knowledgeable in machine coding, will always be available at our meetings to provide assistance for budding m-coders.

Book Review
Introduction To
2060 Machine Code

By Dennis Jurries

The book comes in a paper backed loose leaf binder and has easy to read type. There were some typing errors in the first printing issue that I received that will probably be corrected in later printings.

If you have just started learning machine code or would like to know more about the internal operation of the TS 2068, then this book is highly recommended. If you have been working with machine code on the TS 2068 then I would say that most of the information within this book you would have had to find in other places and unless you wish to have the information in one location then this book is probably not for you.

The basics are explained in depth, such as binary manipulation, memory mapping, Extended ROM, Cartridge Bank, Chunks, Display File, and etc. In addition, a little information is given on 64 & 80 column display along with Hi-Res graphics, the printer buffer, and system variables. Much more information is given in this book than just a beginning introduction to machine code programing.

This book is a must for people wanting to learn machine Code. It was written by Dr. Lloyd Dreger who is affiliated with the SMUG user's group. It is a bargain at $16.95 and can be gotten from RMG Enterprises, 1419 1/2 7th St., Oregon City, OR. 97045.

⁕ ⁕ ⁕ ⁕ ⁕ ⁕

PATS' next meeting will be Saturday, February 14th. PATS meets at Portland Community College's Sylvania Campus, Science & Technology Building, Room B15, the second Saturday of the month from 1 - 4pm.

BITS & BYTES

by ROD GOWEN

Heard any TS related news lately? Did you get any information in the mail from other users, user groups, or vendors that may be of interest to our readers? If so, why not share it with us? We need all of the help that we can get. Please send any info that you might have to: Rod Gowen, C/O CCAT'S, 1419 1/2 7th Street, Oregon City, OR 97045, or, phone in at: 503/655 7484, 10 AM 10 PM weekdays. I know that the entire user group will appreciate it!

ZEBRA SYSTEMS according to news that we have heard, will no longer be selling the ZEBRA SYSTEM TOS DISK SYSTEM. It seems that Timex of Portugal wanted them to buy more units that they thought that there was a market for over here. We are sorry to see another TS product disappear, but we understand the economics.

TIME DESIGNS MAGAZINE is advertising a new book to be released shortly for the QL. It is titled: TAKING THE QUANTUM LEAP and will be available through TDM. It was written by MIKE de SOSA who is a regular columnist for TDM. For more information, please contack TDM at (503)824 2658, or write to them at: TIME DESIGNS MAGAZINE, 29722 HULT ROAD, COLTON, OR 97017.

RMG ENTERPRISES has also announced a new book for the QL. Titled: ARCHIVE MASTER, it is what the name implies, a complete overview of what is to most users, the least understood and without a doubt, the most potentially powerful program that they can get for the QL, ARCHIVE DATA BASE! The book is to be in an 8 1/2x11" format, 3 hole punched and in a nice 3 ring vinyl binder. It is rumored to be over 300 pages in total and the price is set at $44.95. Sounds like a lot, but if it keeps its promise, it will be well worth it! There is a pre publication special on at this time and you can get more info from: RMG ENTERPRISES, 1419 1/2 7TH STREET, OREGON CITY, OR 97045. Or you can call: (503)655 7484.

CASDOARD is a great BBS program for your 2068! If you have been wanting to try setting up a BBS on your own, this is the program that will make it possible! It has multiple message bases, password on/off, upload and download with XMODEM and much more! It is distributed exclusively by E. ARTHUR BROWN CO., 3404 PAWNEE DRIVE, ALEXANDRIA, MN 56308. Or call: (612) 762 8847. The program sells for $19.95 plus shipping.

LARKEN ELECTRONICS just sent us an announcment about the new 2068 disk system they are going to release. It sounds good, but we will wait and see. It is supposed to be a new board for the rear edge connector and a new cartridge board with the DOS on the cartridge. Using bank switching, they will not use any RAM for the DOS. The DOS is called LKDOS and uses standard keyboard commands preceded by: PRINT #4. Just like the RAMEX system did. They tell us that they will have RAMDISK available soon as well as an NMI button. That will allow you to save anything in RAM to the disk. It stands for NON-MASKABLE-INTERUPT. They did not give us new pricing but we will keep you informed. For more information, write to: LARKEN ELECTRONICS, RR#2, NAVAN, ONTARIO, CANADA K4B 1H9.

opy the SINCUS SWAP TAPE, contact the library at 655 7484.

PATS-our new Machine Code SIG, that stand for SPECIAL INTEREST GROUP, is now part of our group. They were a bit disappointed at the low turnout at the January meeting which was the day after our last meeting. They were trying to get interested parties together to set the goals of the SIG. If you are interested, make it a point to attend next time. The time and place is noted elsewhere in this issue. SUPPORT YOUR GROUPS!

QL QORNER-column is no longer a part of THE PLOTTER, if you would like to see a QL column, please let us know. With almost a dozen users in our group, it seems we should have more interest!

SEE YOU NEXT MONTH!!

MORE ON ATTRIBUTES

Dick Wagner

After The Editor read thru Syd Wyncoop's excellant disertation on using direct ink/paper/flash commands imbedded within program lines and trying out his suggestions, I took his advice to experiment.

I found that about 2 more bytes would be required to revert to normal ink/paper if more than 1 line was involved and I wanted to do the listing in black ink.

Personally I find a flashing screen or characters rather distracting while inputting and for sure the flashing is both in the listing and RUN. The different gray scales on a B&W screen don't bother. With the aid of a Spectrum manual I worked it out for the codes 16-20 and not 216-220.

Try some lines like these and you will notice a difference from the imbedded commands Syd described:

```
10 Print CHR$ 16 + CHR$ 6; 'THIS
LINE IS PRINTED IN YELLOW BUT LINE
20 IS BLACK'
20 PRINT '******'
```

Line 20 has reverted to the original color without a command because line 10 is a tempoary color. With imbedded commands an additional command is required. No big deal.

To keep a flashing word off the screen while in List editing mode try this change:

```
10 PRINT CHR$ 16 + CHR$ 6; 'THIS
LINE IS PRINTED IN'; CHR$ 18 + CHR$
1;' YELLOW'; CHR$ 18 + CHR$ 0; ' BUT
LINE 20 IS BLACK'
20 PRINT '******'
```
RUN and display a flashing YELLOW.

Granted this is memory hungry so after testing the program change the lines by deleting the CHR$s and changing to imbedded commands:

```
10 PRINT '(E-mode caps shift 6)
THIS LINE IS PRINTED IN (E-mode caps
shift 9)YELLOW(E-mode caps shift 8)
BUT LINE 20 IS IN BLACK(E-mode caps
shift 0)'
```

```
20 PRINT '******'
```
Don't type in the () marks. Place
the ' ' outside of the commands so
you can see where your commands
start and end.

For reference see the 2068 manual
pages 219-221 and the Spectrum
manual pages 85-88 and 148-150.

Thanks Syd, for demonstrating this
novel feature of Sinclair BASIC.

BOOK REVIEW
Dick Wagner

Computing With The Scientific
Calculator
Radio Shack, $1.95

This book is based on using the
RS EC-4011 (#65-929) solar powered
hand calculator. It coveres formulas
and equations used in statistics,
finance, physics, computer math,
electronics and programming this
calculator.

I have used this calculator for
some time in ordinary calculating
and for converting DEC, HEX, and BIN
numbers. The owner's manual needs
supplementing and this book does it.
Formulas are given for each subject
and then how to key in a problem.
For the computer user, it puts many
formulas into one book and with
limited theory to plow thru. There
are no computer programs so this
book mainly provides many program
subjects and ideas.

How about plotting an object
orbiting the earth at different
altitudes, plotting the path of a
projectile, navigational problems,
problems associated with surveying,
time constants of R-C circuits in
electronics, working with quadratic
equations, depreciation, finance
balance sheets, discounts, chain
discounts, and amoritization, to
name some of the subjects covered by
this small book.

This book (192 pages) is well
printed on good paper and is a good
buy for anyone interest in various
calculations.

FROM THE EDITOR'S DESK

The start of of the 1987 year
shows promise if our first meeting
is an indicator. We have money in
the bank (thanks to a conservative
membership) and almost 50% of the
past members paid up at meeting
time. The consolidation with PAT'S
is past, which is now the backbone
of SIG operations.

There is renewed interest in
obtaining new members as well as
trying to attract past members. One
possible contact is with people who
have a hobby that may be associated
with computers. Examples are
collectors (stamps, antiques,
crystals) who need a good inventory
system, HAMS (amature radio
operators) who may use the
counterpart of our telephone MODEM,
the PACKET system of talking to
computers by radio.

For some reason our organization
fails to interest some people who
have purchased a 1 year membership
(to obtain a discount thru RMG
Enterprises on their early
purchases?) but have rarely or never
attended a meeting. We don't have an
answer to this one yet. Maybe our
membership committee can call these
people to see how successful they
have been in using their computer
equipment.

Now that the TS 1000 computers
are at such a low price, it seems
reasonable to assign one or more to
special uses. How about that Robot
idea? Tim Woods (Time Designs
magazine) has a great book for
helping the mechanically inclined.
Another idea is a weather station.
Computer Updates edited by Thomas B.
Woods of Jefferson NH has published
2 articles on this subject, a
weather vane and an anemometer (wind
velocity), both computerized. These
devices make use of his I/O port
Experimenter's board. These are easy
subjects for people who want to
learn more about computer
electronics and have a useful
project at the same time.

Some of these suggestions could
lead into SIGs for CCAT/TS members.

2ND ANNUAL MIDWEST T-S COMPUTER FEST

According to a recent letter from Paul Holmgren, Executive Director, the experienced gained from Computer Fest No. 1 is showing up in organization and planning for No. 2. The Indiana Sinclair Timex User Group is hard at it and are implementing big plans. There is no doubt that it will be BIG with about 6000 sq.of convention space, a first rate convention hotel (Holiday Inn North, Indianapolis) lecture and seminar rooms, and a reservation system for display space and hotel rooms.

May 2-3, 1987 is the date and reservations should be made soon. As our own Rod and Mary Gowen (RMG Enterprises) will be going and have arranged for display space, Rod has the details so call him at 503-655-7484. Hotel reservations are made by calling 317-872-9790 or writing to the convention hotel, 3850 DePaw Blvd. Indianapolis, IND 46268.

Those attending will see vendors, user groups, magazines, newsletters, and cottage industrie vendors. All of this plus a flea market for used hardware and software.!

I understand that Tim Woods (Time Designs magazine) is leaving the Colton woods and will be attending, along with several of his friends.

For the economy minded, immediate flight reservations will save a bit. Also it will be possible to defray a registration fee by helping the host organization with such duties as local reservations, patrolling the area for unathorized attendance, helping vendors, etc. This is a good deal for about 5 hours of your time.

HOW TALL?

Dick Wagner

There is a way to predict a child' anticipated height when an adult. Age, current height and sex will produce the figure. Try this program for your children (ages 2-17), grandchildren, or young friends and learn what they may expect. If past figures are available see how close such predictions come.

```
20 PRINT PAPER 5; INK 1;AT 0,4
;"How tall will you be?"
30 PRINT "To work out your fin
al height I will need to know yo
ur age, yoursex and your present
 height."
40 PRINT "Firstly, what is you
r age?"
50 PRINT "Please enter the YEA
RS only.."
60 INPUT a
70 BEEP .05,20
80 IF a<2 OR a>17 THEN GO TO 6
0
90 PRINT AT 9,30;a
100 PAUSE 50
110 PRINT "Now the MONTHS pleas
e.."
120 INPUT d
130 BEEP .05,20
140 IF d<0 OR d>=12 THEN GO TO
120
150 PRINT AT 11,24;d
160 LET e=a+(d/12)
170 PAUSE 50
180 PRINT "Now enter ""g"" if y
ou are a      girl or ""b"" if y
ou're a boy.."
190 INPUT s$
200 BEEP .05,20
210 IF s$<>"g" AND s$<>"b" THEN
 GO TO 190
220 PRINT AT 14,30;s$
230 IF s$="b" THEN GO SUB 390
240 IF s$="g" THEN GO SUB 470
250 PAUSE 50
260 PRINT "Lastly please enter
your presentheight in inches.."
270 INPUT h
280 BEEP .05,20
290 PRINT AT 17,19;h
300 LET y=(m*e)+c
310 LET fh=h*100/y
320 LET fh=(INT ((fh+.05)*10))/
10
330 LET ft=INT (fh/12): LET in=
fh-(ft*12)
340 PRINT " your final height w
ill be.."
350 PAUSE 50: FOR z=1 TO 10: BE
EP .02,20: NEXT z
360 PRINT AT 21,9;ft;" FT ";in;
AT 21,20;" IN  "
365 PAUSE 100
370 PRINT #1; PAPER 5; INK 7;"P
RESS ANY KEY TO RERUN PROGRAM "
380 PAUSE 0: CLS : GO TO 20
390 IF a=2 OR a=3 THEN LET m=4.
26: LET c=40.99
400 IF a>3 AND a<7 THEN LET m=3
.64: LET c=43.48
410 IF a>6 AND a<13 THEN LET m=
3.05: LET c=47.59
420 IF a=13 OR a=24 THEN LET m=
4.4: LET c=30.03
430 IF a=15 THEN LET m=2.2: LET
 c=63.1
440 IF a=16 THEN LET m=1: LET c
=82.3
450 IF a=17 THEN LET m=.5: LET
c=90.8
460 RETURN
470 IF a=2 OR a=3 THEN LET m=4.
53: LET c=43.59
480 IF a=4 OR a=5 THEN LET m=4.
25: LET c=44.85
490 IF a>5 AND a<11 THEN LET m=
3.57: LET c=48.88
500 IF a=11 THEN LET m=4.5: LET
 c=38.9
510 IF a=12 THEN LET m=3.6: LET
 c=49.7
```

6

```
 520 IF a=13 THEN LET m=1.8: LET
  c=73.1
 530 IF a=14 THEN LET m=.8: LET
c=87.1
 540 IF a=15 THEN LET m=.5: LET
c=91.6
 550 IF a=16 THEN LET m=.4: LET
=93.2
 560 IF a=17 THEN LET m=0: LET c
=100
 570 RETURN
```

— ✳ — ✳ — ✳ — ✳ — ✳ — ✳ — ✳ — ✳ —

Book Review
The Timex/Sinclair
2068 ROM Manuscript

by Dennis Jurries

I purchased this paper bound loose leaf book in the hopes that I would have a copy of a 2068 ROM disassenbly such as is available for the Spectrum. I was disappointed in this aspect. What is in this book is a copy of the TS 2068 ROM with some notes and comments on some of the routines. While it wasn't what I was looking for, I still purchased the manuel because I do a lot of program conversions from Spectrum to 2068 and can realy make use of having a copy of the 2068 ROM that I can refer to while I disassemble some similar routine on the Spectrum ROM. Some of the comments are help-ful. What I was looking for was something that told me what registers had to contain before calling upon these routines from my machine code routines in RAM.

This book in combination with a Spectrum ROM Disassembly would be a fairly good combination to use until a ROm disassembly of the 2068 gets written with all the information needed to be truly use-ful. I found the price of $16.95 to be worthwhile compared to the time and printer paper I use up everytime I have to compare the Spectrum and the TS 2068 ROM's. This book was written by Dr. Lloyd Dreger and is distributed by RMG Enterprises, 1419 1/2 7 th St., Oregon City, OR 97045. If you purchase this with the INTRODUCTION TO 2068 MACHINE CODE combination price is only $30.00 plus $3.00 shipping.

++NOTICE++

Salem TV station 22, KWVT, is airing the national TV series "THE COMPUTER SHOW" on Sunday afternoons 12-1 PM. This is reported to be a show of news, product demon-strations, analysis, field reports, an interaction phone-in segment, product giveaways and more. Future show segments will also focus on desktop publishing, preventive maintenance, graphics, and information on how computers can communicate with each other.

The show is also on each Friday morning at 7:30 AM. Home satelite users can pick up the same program Tuesday evenings, 7-8 PM by tuning to Westar IV, transponder 5D.

!!!OLEY!!!

For the musically? inclined this little Mexican ditty will raise some question as to the musical ability of our 2068 computers. Anyway, give it a try. Courtesy of Sinclair User magazine Jan. 86 issue. Surprising what one can find in a magazine!

```
  5 GO TO 50
 10 DATA 19,16,18,15,19,-12,16,
12,15,11,16,-5,12,7,11,7,12,-12,
7,4,7,4,7,-5,4,0,5,2
 15 DATA 7,-12,9,5,11,2,12,4,14
,-5,16,7,17,-10,14,9,14,7,14,-5
 20 DATA 17,14,16,13,17,-10,14,
11,13,10,14,-5,11,7,10,6,11,-10,
7,2,7,-1,7,-5,19,11,18,10
 25 DATA 19,-10,21,17,19,16,17,
-5,16,11,14,5,12,-12,12,-8,12,-5
,12,0
 30 DATA 14,9,14,7,-6,14,9,6,9,
4,-10,9,12,4,12,6,-5,12,11,7,11,
-10,11,-5
 35 DATA 14,11,14,7,14,-6,9,6,9
,4,9,-10,12,6,9,2,11,-5,9,2,7,2,
7,-1
 40 DATA 14,9,14,7,14,-6,9,6,9,
4,9,-10,12,6,14,6,12,-5,11,7,11,
-10,11,-13
 45 DATA 14,9,14,7,14,-12,16,7,
14,7,12,-6,11,7,9,0,7,-5,7,-1,7,
2,7,5
 50 PRINT AT 10,3;"   Press any
key to play"
 55 PAUSE 0
 60 INK INT (RND‡6)+1: FLASH 1:
CLS
 65 PRINT AT 10,8; BRIGHT 1; IN
K 0;"!!!OLEY!!!"
 70 LET co=96: LET pl=0
 90 FOR n=1 TO co
100 READ a,b
105 FOR c=1 TO 3
110 BEEP .02,a: BEEP .02,b
115 NEXT c
120 NEXT n
125 LET pl=pl+1
130 IF pl=2 THEN FLASH 0: INK 0
: RUN
140 RESTORE : LET co=48: GO TO
90
```

BOLD

Bob Evans

This is a program that may be used in most any program to use bold type with the touch of a key.

Line 9000 places MC above RAMTOP Line 9050 goes to the start of the program. Line 9500 changes standard to BOLD or BOLD to standard and 9540 returns to program start.

```
  10 STOP
9000 RESTORE 9040
9005 FOR b=1 TO 29
9010 READ a
9020 POKE 65267+b,a
9030 NEXT b
9040 DATA 17,0,221,213,1,0,3,42,
54,92,36,126,167,31,182,18,35,19
,13,32,246,16,244,225,37,34,54,9
2,201
9050 GO TO 10
9500 CLS
9520 IF PEEK 23607=60 THEN RANDO
MIZE USR 65268: GO TO 10
9530 POKE 23607,60
9540 GO TO 10
```

machine code used in the BOLD program printed in the January issue of THE PLOTTER but it will be easier to use as BOLD characters can be selected at will within a program. Lines 9520 and 9530 switch between standard text and BOLD.

CCAT/St
1419 1/2 7TH Street
Oregon City, OR 97045

(place label here)

Rod Gowen